

New species and new records of Staphylinidae (Coleoptera) from India and Sri Lanka

by

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With 69 figures

ABSTRACT

295 specimens of Staphylinidae from South India and Sri Lanka are studied. The 23 respresented species belong to 5 genera; five species are described as new to science: *Priochirus (Plastus) lankcus*, *Thoracochirus decanus*, *Paederus besucheti*, *Paederus (Pseudopaederus) loebli* and *Paederus (Pseudopaederus) mussardi*.

This paper deals with the study of a collection of Staphylinidae deposited in the Museum d'Histoire naturelle de Genève, collected chiefly from South India and Sri Lanka during 1970 to 1978 by Mussard, Besuchet and Löbl. This collection comprises 295 examples belonging to 23 species under 5 genera. The authors wish to express their sincere thanks to Dr. Besuchet and Dr. Löbl of the Muséum d'Histoire naturelle de Genève who kindly provided the authors an opportunity to examine those material. The authors are also thankful to the Director, Zoological Survey of India, for providing the laboratory facilities.

Family STAPHYLINIDAE

Subfamily OXYTELINAE

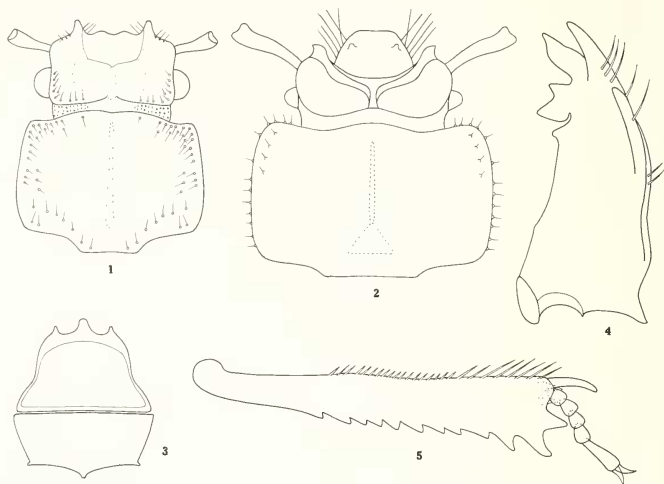
1. *Thoracochirus simoni* (Fauvel) (Figs. 6-12, 22-23, 29, 33)

Leptochirus simoni Fauvel, 1902, *Revue Ent.* 21: 21; CAMERON 1930, *Fauna of British India* 1: 120.

FAUVEL (1902) described this species from Sri Lanka. This species can be separated from other known species of *Thoracochirus* by its lateral margin of prothorax devoid

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of any tubercles or denticles and dorsal surface without granules. Species small and pitchy red, shining, dorsal surface of head and prothorax moderately densely punctured, before posterior angles of lateral margin of prothorax with distinct groove (Fig. 7).



FIGS. 1-5.

- 1: *Prtiochirus (Plastus) lankcus* sp. nov., head and prothorax, dorsal view;
 2: *Thoracochirus verrucifer* Fauvel, head and prothorax, dorsal view;
 3: *Thoracochirus decanus* sp. nov., labium, dorsal view;
 4: *Thoracochirus verrucifer* Fauvel, right mandible; 5: Front tibia, dorsal view.

Specimens examined: SRI LANKA: Sabaragamuwa, Kalawana, 20.I.1970, 4 exs., Besuchet-Löbl collection; Sri Lanka Central: Matele, 400 m, 17.I.1970, 6 exs., Besuchet-Löbl collection; Kandy, 600 m, 19.I.1970, 30 exs., Besuchet-Löbl collection.

Distribution: SRI LANKA.

2. *Thoracochirus assamensis* Cameron (Figs. 13-17, 24, 32, 34-36)

Thoracochirus assamensis Cameron, 1930, *Fauna of British India* 1: 120.

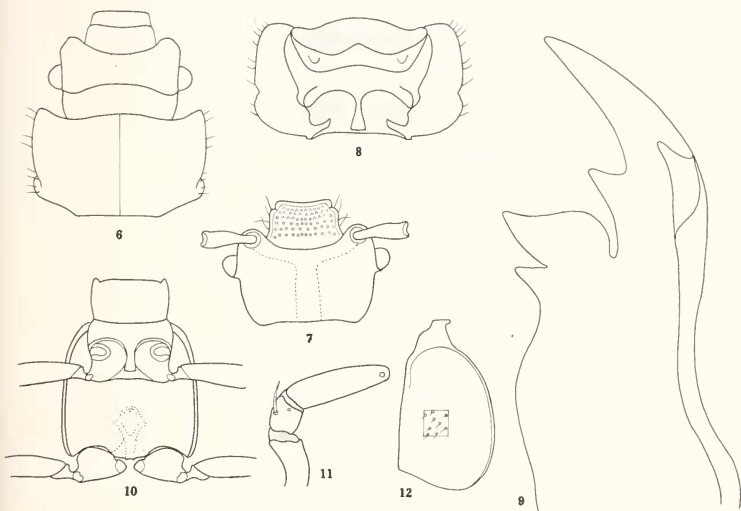
This species is closely related to *Thoracochirus variolosus* (Fauvel) but can be easily separated from the latter species by its lateral margins of prothorax and elytra with numerous and long denticles, elytra distinctly rugose.

Specimens examined: INDIA: West Bengal, Tung, 28 km. from Tindharia, 25.III.1978, 8 exs., A. R. Bhaumik and Party collection.

Distribution : INDIA (West Bengal and Naga Land). This species is being recorded here for the first time from West Bengal.

3. *Thoracochirus verrucifer* (Fauvel) (Figs. 2, 4-5, 19, 25)

Leptochirus verrucifer Fauvel 1895, *Revue Ent* 14: 182; Cameron 1930, *Fauna of British India* 1: 119.



FIGS. 6-12.

6: *Thoracochirus simoni* (Fauvel), head and prothorax, dorsal view; 7: head, ventral view; 8: prothorax, ventral view; 9: right mandible; 10: mesometathorax, ventral view; 11: left labial palpi, dorsal view; 12: right elytron, dorsal view.

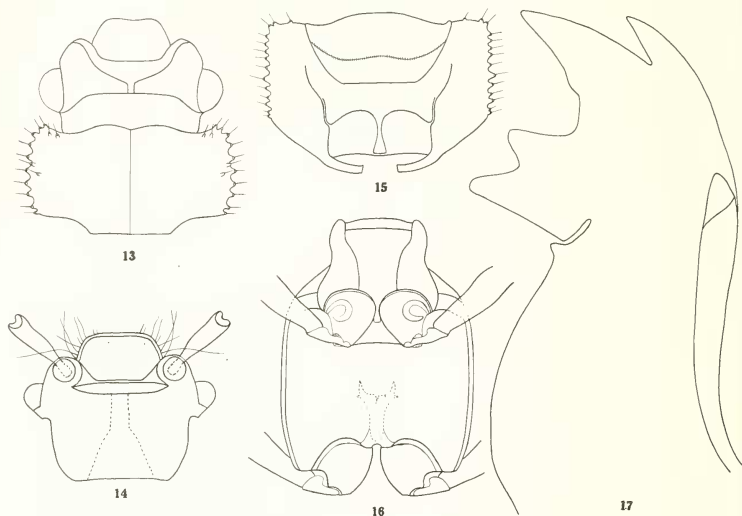
This species is characterized by the apex of the antennal ridge with broadly incurved tubercle, front of head deeply excavated, clypeus with two small teeth (Fig. 18), vertex sulcate, surface of head and prothorax with large umbilicate punctures, dorsal surface of elytra with large sitiferous punctures.

Specimens examined: INDIA: Arunachal Pradesh, Renging, 2150 ft., Abor Expedition, 19.XII.1911, 4 exs., S. W. Kemp collection; BURMA: Sansi Gorge, Chinese frontier, N. E. Burma, 6000-8000 ft., — XII.1910, 1 ex., C. W. Beebe collection.

Distribution : INDIA (Arunachal Pradesh); BURMA.

4. *Thoracochirus decanus* sp. nov. (Figs. 3, 18, 20-21, 26)

This species is closely related to *Thoracochirus verrucifer* (Fauvel) but can be easily separated from the latter species by its small size, vertex of head elevated, dorsal surface of head near post-ocular region finely punctured, antennal ridges normal, eyes small and not prominent, prothorax depressed, lateral sides near margins vertically



FIGS. 13-17.

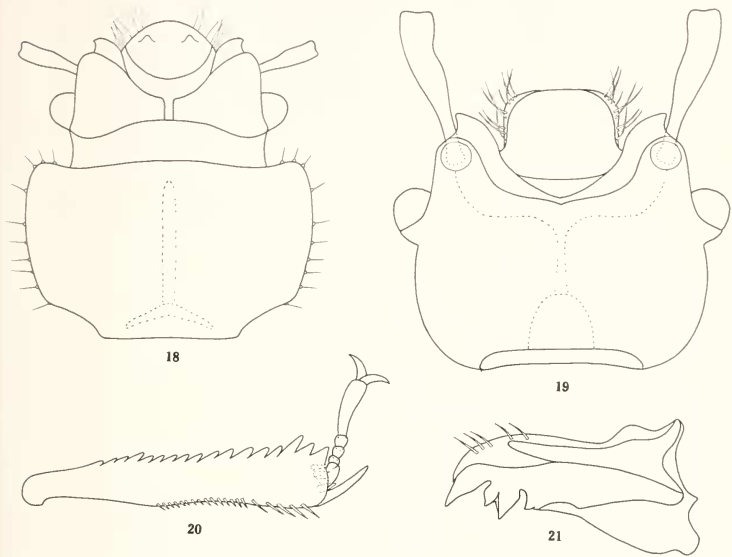
13: *Thoracochirus assamensis* Cameron, head and prothorax, dorsal view;
 14: head, ventral view; 15: prothorax, ventral view; 16: mesometathorax, ventral view;
 17: right mandible.

impressed throughout, elytra finely and sparsely punctured, antennae pitchy, apex of scape and pedicel reddish and mandible different and as figured (Fig. 21).

General appearance small, black, shining, mandible, palpi, elytra and legs reddish brown.

Head small, transverse, narrower than prothorax, vertex elevated and sulcate medially, anterior margin broadly emarginate, antennal ridges normal and its apex with a small tooth whose base is impressed, surface near eyes rather densely and finely punctured. Antennae rather large and stout, segments 2-6 distinctly longer than broad, segments 7-9 slightly longer than broad, segment 10 as long as broad. Eyes small and not prominent. Clypeus rather impunctate, with two small teeth on each side near lateral side (Fig. 18). Mandible as figured (Fig. 21). Prothorax transverse and its lateral sides

near margin vertically impressed throughout, disc sulcus at base deeply impressed triangularly (Fig. 18), surface thinly and finely umbilicate punctures. Scutellum transversely triangular and impunctate. Elytra transverse, surface finely and sparsely punctured. Abdomen finely punctured. Species covered with fine yellow pubescent.



FIGS. 18-21.

18: *Thoracochirus decanus* sp. nov., head and prothorax, dorsal view;

19: *Thoracochirus verrucifer* Fauvel, head, ventral view;

20: *Thoracochirus decanus* sp. nov., front tibia, dorsal view; 21: right mandible.

Measurements of holotype: Total length 5.60 mm; width of head across eyes 1.10 mm; length of prothorax 0.90 mm and width of prothorax 1.45 mm; length of elytra 1.50 mm and width of elytra 1.50 mm.

Holotype: INDIA: Kerala, Cardamon H., Muthapatti Pass, Munnar, 1300 m, 24.XI.1972, Mussard, Besuchet and Löbl collection; Paratypes 18 exs., 12 exs., same locality data as holotype; Tamil-Nadu: Madras, Anaimalai H., 18 km. from N. Valparai, 1250 m, 18.XI.1972 2 exs., Mussard, Besuchet and Löbl collection; Madras: Palni H., 7 km. E. from Kodaikanal, 1750 m, 12.XI.1972, 4 exs., Mussard, Besuchet and Löbl collection (Holotype and 13 Paratypes deposited in Muséum d'Histoire naturelle de Genève and 5 Paratypes in Zoological Survey of India, Calcutta).

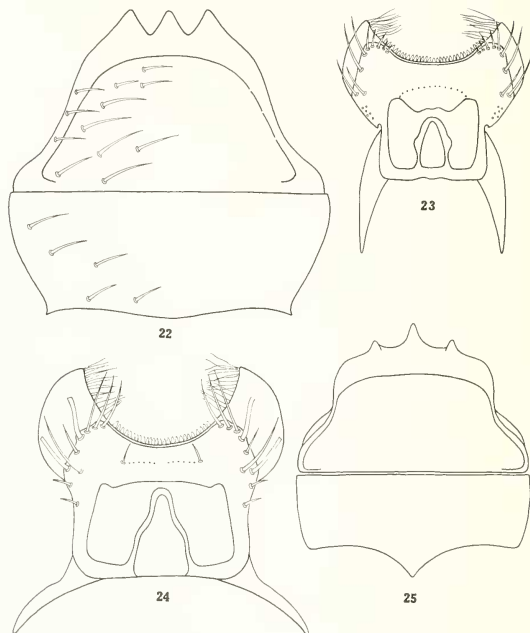
Distribution: INDIA (Kerala and Tamil-Nadu).

5. *Leptochirus (Strongylochirus) laevis* Cast.

Leptochirus laevis Cast., 1840, *Hist. Nat.* 1: 186

Leptochirus laticeps Erichson, 1840, *Gen. Spec. Staph.*: 826.

Leptochirus idae Kraatz, 1859, *Arch. Naturg.* 25 (1): 19.



FIGS. 22-25.

- 22: *Thoracochirus simoni* (Fauvel), labium, dorsal view;
 23: labrum, dorsal view; 24: *Thoracochirus assamensis* Cameron, labrum, dorsal view;
 25: *Thoracochirus verrucifer* Fauvel, labium, dorsal view.

This species can be recognised by its clypeus being not in the same plane and separated by an impressed line, the sides are also bounded by a curved impressed line. Antennal scape moderately large with its apex emarginate.

Specimens examined: INDIA: Meghalaya, Khasi Hills, 700 m, Nougpho, 5.XI.1978. 5 exs., Besuchet and Löbl collection.

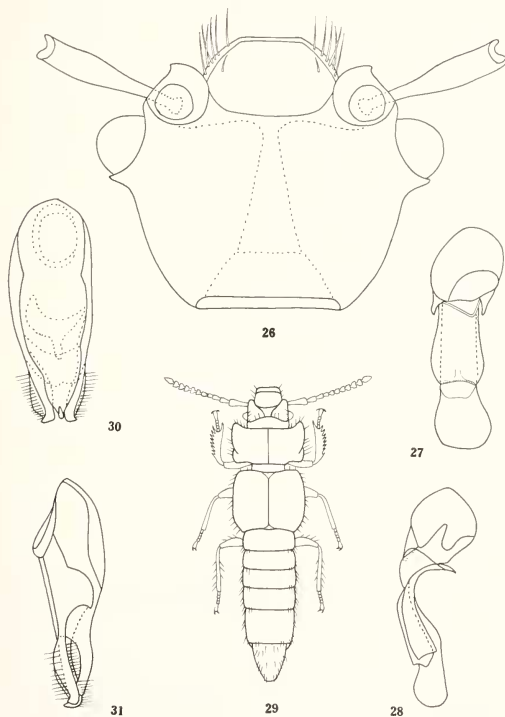
Distribution: INDIA (Meghalaya and Nagaland); SIAM; SINGAPORE; SUMATRA; JAVA; LOMBOK AND BORNEO.

6. *Priochirus* (*Triacanthochirus*) *bipunctatus* (Fauvel)

Leptochirus bipunctatus Fauvel, 1895, *Revue Ent.* 14: 180

Priochirus (*Triacanthochirus*) *bipunctatus*: CAMERON 1930, *Fauna of British India* 1: 97-98.

This species is closely related to *Priochirus* (*Triacanthochirus*) *apicalis* (Eppelsheim) but can be easily separated from the latter species by its prothorax being distinctly nar-



FIGS. 26-31.

26: *Thoracochirus decanus* sp. nov., head, ventral view;

27: *Priochirus* (*Plastus*) *lankcus* sp. nov., aedeagus, dorsal view; 28: aedeagus, lateral view;

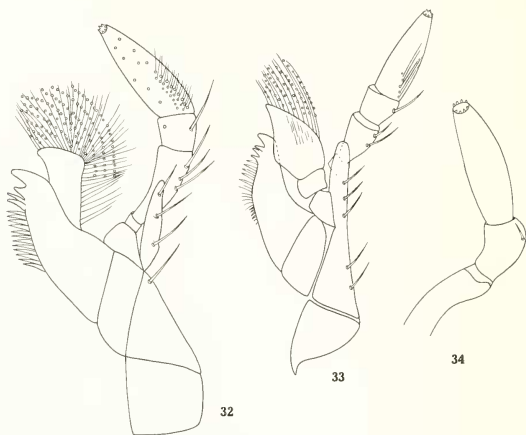
29: *Thoracochirus simoni* (Fauvel), dorsal view;

30: *Paederus besucheti* sp. nov., aedeagus, dorsal view; 31: aedeagus, lateral view.

rower, the middle tooth of head narrowed before apex and pointed, lateral margins of prothorax rather coarsely and closely punctured.

Specimens examined: INDIA: Assam, Manas, 200 m, 23.X.1978. 4 exs., Besuchet and Löbl collection.

Distribution: INDIA (Sikkim, Assam) AND BURMA. This species is being recorded here for the first time from Assam.



FIGS. 32-34.

- 32: *Thoracochirus assamensis* Cameron, right maxilla, dorsal view;
 33: *Thoracochirus simoni* (Fauvel), right maxilla, dorsal view;
 34: *Thoracochirus assamensis* Cameron, right labial palpi, dorsal view.

7. *Priochirus* (*Triacanthochirus*) *pentagonalis* Bernhauer

Priochirus (*Triochirus*) *pentagonalis* Bernhauer, 1914, *W.Z.B.* 64: 78.

Triacanthus fletcheri var. *analis* Cameron, 1920, *Entomologist's mon. Mag.* 56: 142.

Priochirus (*Triacanthochirus*) *pentagonalis*: CAMERON 1930, *Fauna of British India* 1: 98-99.

This species can be easily distinguished by its front margin of head with three small teeth, apex of middle tooth slightly behind the apices of lateral teeth, frontal impression about twice as broad as long, antennal segments densely pubescent, prothorax distinctly transverse and closely punctured.

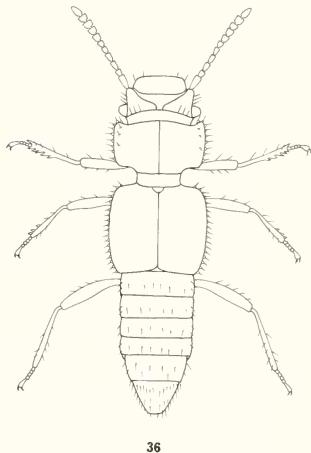
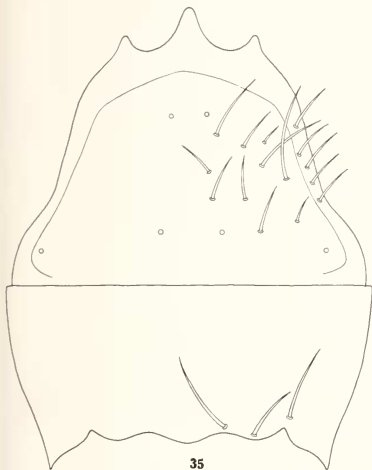
Specimens examined: INDIA: Tamil-Nadu, Madras, Anaimalai H., 18 km. N. Valparai, 1250 m., 18.XI.1972, 2 exs., Mussard, Besuchet and Löbl collection.

Distribution: INDIA (Tamil-Nadu).

8. *Priochirus (Cephalomerus) rufus* Cameron

Priochirus (Cephalomerus) rufus Cameron, 1920, *Entomologist's mon. Mcg.* 56: 142; 1930, *Fauna of British India* 1: 104-105.

CAMERON (1920) described this species from Tamil Nadu. This is a distinct species, entirely red and large, inner teeth of front margin of head distinctly more produced than lateral teeth, the distance between the apices of inner and outer teeth greater than the



FIGS. 35-36.

35: *Thoracocheirus assamensis* Cameron, labrum, dorsal view; 36: dorsal view.

distance between the apices of inner teeth, antennae pitchy, scape red and sulcate throughout longitudinally.

Specimen examined: INDIA: TAMIL-NADU, Anaimalai H., 18 km. from N. Valparai, 1250 m, 18.XI.1972, 1 ex., Besuchet, Mussard and Löbl collection.

Distribution: INDIA (Tamil-Nadu).

9. *Priochirus (Cephalomerus) rubiginosus* Cameron (Fig. 35)

Priochirus (Cephalomerus) rubiginosus Cameron, 1930, *Fauna of British India* 1: 105-106.

This species is closely related to *Priochirus (Cephalomerus) sanguinosus* Motschulsky but can be easily separated from the latter species by its elytra being black, base more or less broadly reddish, penultimate abdominal segment blackish, frontal margin semi-elliptically excised, frontal teeth well developed and lateral teeth small and closely situated, and antennae blackish.

Specimens examined: INDIA: Meghalaya, Khasi Hills, 700 m. Nougphoh, 5.XI.1978. 6 exs., Besuchet and Löbl collection.

Distribution: INDIA (Sikkim, Nagaland, Meghalaya). This species is being recorded here for the first time from Meghalaya.

10. *Priochirus (Cephalomerus) sanguinosus* (Motschulsky) (Fig. 36)

Leptochirus sanguinosus Motschulsky, 1857, *Bull. Mosc.* 30 (4): 501.

This species is characterised by its bright ferruginous red, shining, elytra with posterior margin and penultimate abdominal segment blackish, antennae pitchy, scape red and sulcate throughout, frontal impression of head club-shaped.

Specimens examined: INDIA: Tamil-Nadu, Madras, Anaimalai H., 18 km N. de Valparai, 1250 m, 18.XI.1972, 2 exs., Besuchet, Löbl and Mussard collection.

Distribution: INDIA (West Bengal, Arunachal Pradesh and Tamil-Nadu); BURMA.

11. *Priochirus (Plastus) lankcus* sp. nov. (Figs. 1, 27-28)

This species is closely related to *Priochirus (Plastus) taprobanus* Cameron but can be easily separated from the latter species by its anterior margin of head not straight (Fig. 1), frontal impression more than twice as broad as long, each side of vertex with longitudinal, broad and arcuate impression, antennal segment 5 transverse and head devoid of any fovea.

General appearance pitchy and shining. Head strongly transverse, frontal horns small, frontal impression more than twice as broad as long, anterior margin slightly emarginate at the middle, vertex broadly sulcate, each side of vertex with longitudinal arcuate impression (Fig. 1), at base with a row of coarse punctures. Antennae short and stout, segments 5-10 transverse. Eyes small and prominent. Prothorax distinctly transverse, with distinct but few punctures at the anterior margin, lateral ridges explanate. Elytra one and half times longer than prothorax, surface more or less impunctate, lateral margins with a few fine punctures. Abdomen densely and superficially punctured. Aedeagus as figured (Fig. 27-28).

Measurements of holotype: Total length 8.40 mm; width of head across eyes 1.80 mm; length of prothorax 2.30 mm and width of prothorax 1.80 mm; length of elytra 2.10 mm and width of elytra 1.80 mm.

Holotype ♂, SRI LANKA: Central, Kandy, 700 m, 16-17.XI.1970, Mussard, Besuchet and Löbl collection; Paratypes 15 exs., collection data same as holotype (Holotype and 10 Paratypes deposited in Muséum d'Histoire naturelle de Genève and 5 Paratypes in Zoological Survey of India, Calcutta).

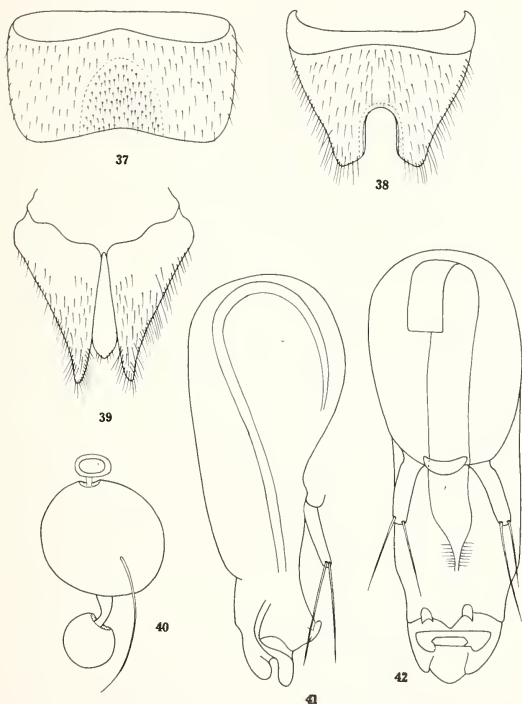
Distribution: SRI LANKA (Kandy).

12. *Bledius (Pucerus) gracilicornis* Kraatz (Figs. 40-42)

Bledius gracilicornis Kraatz, 1859, *Arch. Naturg.* 25 (1): 169; CAMERON 1930, *Fauna of British India* 1: 276.

This species is described by KRAATZ from Sri Lanka and can be recognised by its black and shining colour, elytra testaceous, the base and suture broadly infuscate, antennae blackish and segments 1-4 testaceous, head impunctate and coriaceous, clypeus with two small teeth in front, spermatheca and aedeagus as figured (Figs. 40-42).

Specimens examined: INDIA: Tamil-Nadu, Madras, Anaimalai H., près d'Aliyar Dam, 300 m, 17.XI.1972, 23 exs., Mussard, Besuchet and Löbl collection; SRI LANKA:



FIGS. 37-42.

37: *Paederus besucheti* sp. nov., sternite five, male; 38: sternite six, male;

39: tergum seven, male;

40: *Bledius (Pucerus) gracilicornis* Kraatz, Spermatheca; 41: aedeagus, lateral view; 42: aedeagus, dorsal view.

Southern, Tissamaharama, 23.I.1970, 7 exs., Mussard, Besuchet and Löbl collection; North Central, Alut Oya, 3.II.1970, 1 ex., Mussard, Besuchet and Löbl collection.

Distribution: INDIA (Tamil-Nadu); SRI LANKA and BURMA. In the present study this species is being recorded here for the first time from India.

Subfamily PAEDERINAE

13. *Paederus besucheti* sp. nov. (Figs. 30-31, 37-39, 48-49)

This species is closely related to *Paederus amplicollis* Kraatz but can be easily separated from the latter species by its anterior margin of labrum broadly emarginate and unidentate at the middle; elytra as long as prothorax; prothorax broader than head and slightly longer than broad, its lateral margins emarginate before posterior angles and above emargination a vertically impressed line present; posterior margin of abdominal sternite 5 of male broadly emarginate and impressed which extends more than half of its length, the impression densely punctured and pubescent than the rest of the surface (Fig. 37), abdominal sternite 6 of male deep, broad parallel-sided excision with rounded apex (Fig. 38).

Head as long as broad, post-ocular region gently rounded, dorsal surface densely covered with large and small punctures. Antennae long and slender, segment 3 more than twice as long as segment 2, all the segments distinctly longer than broad. Eyes large but not prominent. Prothorax slightly longer than broad, convex, slightly broader than head, anterior angles broadly rounded, puncturation similar to that of head. Elytra as long as prothorax. Scutellum red, tongue-shaped and finely punctured. Abdomen densely and finely punctured. Aedeagus as shown in figures (Figs. 30 & 31).

Measurements of holotype: Total length 17.40 mm; width of head across eyes 1.80 mm; length of prothorax 2.30 mm and width of prothorax 1.90 mm; length of elytra 2.10 mm and width of elytra 1.80 mm.

Holotype ♂, SRI LANKA: Central, Horton Plains, 2100 m, 15.II.1970; Paratypes 6 ex., Horton Plains, 2100 m, 15.II.1970, 1 ex.; Pidurutalagala, 2500 m, 29.I.1970, 2 ex.; Nuwara Eliya, 1950 m, 29.I.1970, 1 ex.; Southern: Yala Nat. Park, 24.I.1970, 1 ex.; Northern: Puliyan Kulam, 6.II.1970, 1 ex., all the specimens collected by Mussard, Besuchet and Löbl (Holotype and 4 Paratypes deposited in Muséum d'Histoire naturelle de Genève and 2 Paratypes in Zoological Survey of India, Calcutta).

Distribution: SRI LANKA.

14. *Paederus setifer* Cameron

Paederus setifer Cameron, 1914, *Trans. R. ent. Soc. Lond*: 538; CAMERON 1931, *Fauna of British India* 2: 60.

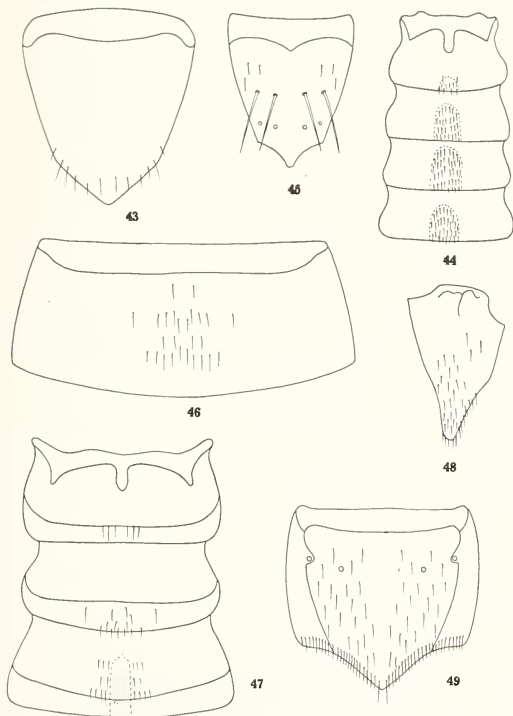
CAMERON (1914) described this species from Sri Lanka. This species is closely related to *Paederus andrewesi* Fauvel but can be easily separated from the latter species by its elytra being longer and metallic blue, antennae and legs completely testaceous, abdominal sternite 6 of male with broad excision and its edges not bordered.

Specimens examined: SRI LANKA: Ura Haputale, 1350 m, 23.I.1970, 2 ex., Mussard, Besuchet and Löbl collection,

Distribution: SRI LANKA.

15. *Paederus* (*Pseudopaederus*) *nigerrimus* Bernhauer

Paederus (*Pseudopaederus*) *nigerrimus* Bernhauer, 1915, *W. Z. B.* 65: 137; CAMERON 1931. *Fauna of British India* 2: 62-63.



FIGS. 43-49.

43: *Paederus* (*Pseudopaederus*) *loebli* sp. nov., tergum six, male; 44: abdominal segments, ventral, male; 45: *Paederus* (*Pseudopaederus*) *mussardi* sp. nov., tergum six, male; 46: *Paederus* (*Pseudopaederus*) *pallidus* Bernhauer, sternite four, male; 47: abdominal segments, ventral, male; 48: *Paederus besucheti* sp. nov., sternite seven, male; 49: tergum six, male.

This is a distinct species and can be recognised by the following characters: Robust, cylindrical, bright black, abdominal segment 6 broadly and segment 7 completely reddish, antennae dark brown and segments 1, 2, 10 and 11 reddish yellow, maxillary palpi dark brown with apex reddish yellow, base and apex of tibiae and tarsi reddish yellow. Head transverse and slightly narrower than prothorax. Labrum with anterior margin rather straight and anterior angles prominent. Prothorax distinctly convex and slightly longer than broad. Elytra about half as long as prothorax and its surface rough.

Specimen examined: INDIA: Tamil-Nadu, Madras, Palni Hill, 10 km. from Kodaikanal, 2200 m, 13.XI.1972, 1 ex., Mussard, Besuchet and Löbl collection.

Distribution: INDIA (Tamil-Nadu).

16. *Paederus (Pseudopaederus) pallidus* Bernhauer (Figs. 46-47, 50-53, 64-65, 69)

Paederus (Pseudopaederus) pallidus Bernhauer, 1915, *W.Z.B.* 65: 138; CAMERON 1931, *Fauna of British India* 2: 63.

This species is closely related to *Paederus (Pseudopaederus) nigerrimus* Bernhauer but can be easily separated from the latter species by its form being smaller and narrower, uniformly bright red, antennae and legs reddish yellow, anterior angles of labrum not prominent, elytra less than half as long as prothorax, humeral angles prominent, posterior margin narrowly infusate, surface not so rough and densely and coarsely punctured, posterior margins of abdominal segments finely punctured and rest is more or less impunctate, abdominal sternite 3 of male scarcely and sternites 4-5 superficially and sternite 6 broadly impressed in the middle at posterior margin, impressed areas thinly punctured and pubescent, sternite 7 with a deep and narrowly parallel sided excision and its edges bordered (Figs. 46-47, 50, 64). So far this species was represented by a single specimen. In the present study both male and female have been discovered and male aedeagus is illustrated (Figs. 51 & 52).

Specimens examined: INDIA: Tamil-Nadu, Palni Hill, 1750 m, Kodaikanal, Madras District, 12.XI.1972. 9 exs.; Kerala: Cardamon H., Muthapalli Pass, Munnar, 1700 m, 24.XI.1972, 11 exs.; Cardamon H., Cop., 13 km. N.E. of Munnar, 1900 m., 26.XI.1972, 2 exs., all the specimens collected by Mussard, Besuchet and Löbl.

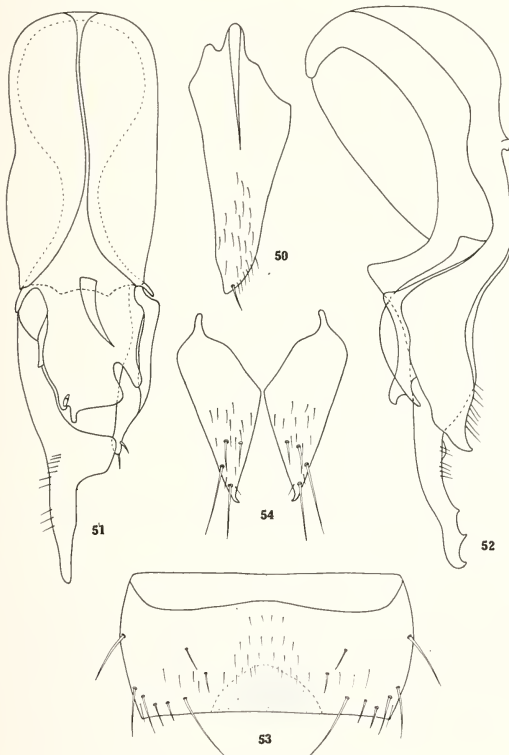
Distribution: INDIA (Tamil-Nadu, Kerala). This species is being recorded here for the first time from Kerala.

17. *Paederus (Pseudopaederus) loebli* sp. nov. (Figs. 43-44, 55-56, 63, 66-68)

This species is closely related to *Paederus (Pseudopaederus) pallidus* Bernhauer but can be easily separated by its size being smaller, pitchy, head more transverse, densely and coarsely punctured at the base, elytra vertically impressed near lateral margins and slightly longer, surface rather finely punctured, posterior margin of abdominal segments 1-4 more coarsely punctured, posterior margin of abdominal sternites 2-5 of male distinctly impressed at the middle, impressed areas densely punctured and pubescent (Fig. 44), aedeagus different (Figs. 66-67).

Head transverse, post-ocular region broadly rounded, surface rather coarsely and densely punctured. Antennae short and stout, segment 3 one and half times longer

than segment 2, segments 4-7 distinctly longer than broad, segments 8-9 slightly longer than broad and segment 10 as long as broad. Eyes moderately large but not so prominent. Prothorax convex, slightly longer than broad, lateral margins gently rounded, anterior margin slightly broadened, surface near lateral margins with a few large and small punctures. Elytra slightly smaller than prothorax, surface rough, rather sparsely and not coarsely punctured. Abdomen with posterior margin of segments 2-5 with a row of coarse punctures. Abdominal sternite 6 of male with a deep narrow parallelsided excision and its edges bordered (Fig. 55), sternite 5 broadly and superficially (Fig. 68),



Figs. 50-54.

50: *Paederus (Pseudopaederus) pallidus* Bernhauer, sternite seven, male,

51: aedeagus, dorsal view; 52: aedeagus, lateral view;

53: sternite five, male; 54: *Paederus (Pseudopaederus) mussardi* sp. nov., tergum seven, male.

sternites 3-4 deeply and sternite 2 scarcely impressed at middle, impressed areas more closely punctured and pubescent (Fig. 44). Aedeagus as figured (Figs. 66-67).

Measurements of holotype: Total length 6.10 mm; width of head across eyes 1.10 mm; length of prothorax 1.30 mm and width of prothorax 1.10 mm; length of elytra 0.85 mm and width of elytra 1.00 mm.

Holotype ♂, INDIA: Kerala, Cardamon Hill, Muthapalli Pass, Munnar, 1700 m, 24.XI.1972, Mussard, Besuchet and Löbl collection; Paratypes 2 exs., collection data same as holotype (Holotype and 1 Paratype deposited in Muséum d'Histoire naturelle de Genève and 1 Paratype in Zoological Survey of India, Calcutta).

Distribution: INDIA (Kerala).

18. *Paederus (Pseudopaederus) mussardi* sp. nov. (Figs. 45, 54, 57-62)

This species is closely related to *Paederus (Pseudopaederus) loebli* sp. nov. but differs from latter species by smaller size, elytra reddish, abdominal segments 1-5 yellowish, surface of head, prothorax, elytra and abdomen more densely punctured, eyes large and prominent, abdomen broader, antennal segments 4-8 distinctly longer than broad and aedeagus different and as figured (Figs 57 & 58).

General appearance rather cylindrical, small, shining, covered with long black setae, head and abdominal segments 6-7 dark brown, labrum, palpi, mandibles, antennae (except segments 1-2 which are yellowish), prothorax, abdominal segments 1-5 testaceous, elytra reddish and legs yellowish.

Head transverse, subquadrate, post-ocular region gently rounded and its surface densely covered with large and small setiferous punctures. Antennae rather short and stout, segment 3 slightly longer than segment 2, segment 9 slightly longer than its breadth and segment 10 as long as broad. Prothorax convex, slightly longer than broad, slightly narrowed posteriorly, lateral margin almost straight and front angles broadly rounded. Elytra slightly shorter than prothorax, narrowed at base, and unlike *Paederus (P.) loebli* vertical impression near lateral margins absent. Abdomen broader, posterior margins finely punctured. Abdominal sternite 6 of male with a deep narrow parallel sided excision and its apex rounded (Fig. 59).

Measurements of holotype: Total length 4.25 mm; width of head across eyes 0.80 mm; length of prothorax 0.90 mm and width of prothorax 0.75 mm; length of elytra 0.60 mm and width of elytra 0.70 mm.

Holotype ♂, INDIA: Kerala, Cardamon Hill, entre Pambanar et Peermade, 750 m, 9.XI.1972, Mussard, Besuchet and Löbl collection; Paratypes 15 exs., collection data same as holotype; Cardamon Hill, 450-600 m, Valara Fall, 46 km S. Munnar, 25.XI.1972, 5 exs., Mussard, Besuchet and Löbl collection (Holotype and 15 Paratypes deposited in Muséum d'Histoire naturelle de Genève and 5 Paratypes in Zoological Survey of India, Calcutta).

Distribution: INDIA (Kerala).

19. *Paederus alternans* Walker

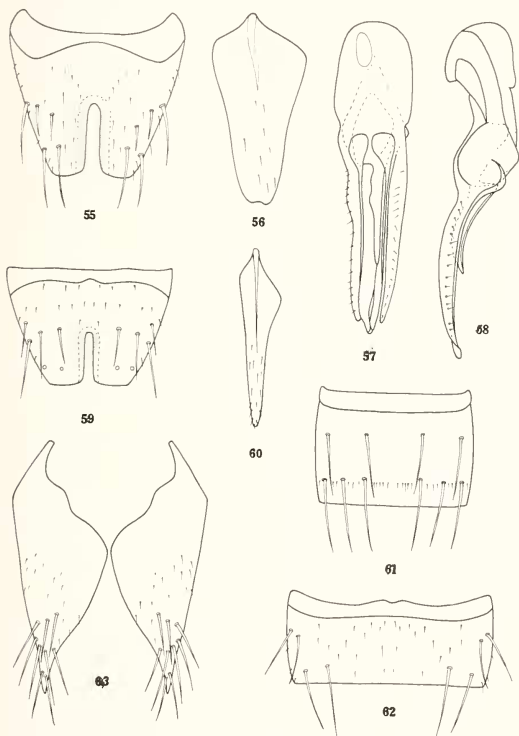
Paederus alternans Walker, 1858, *Ann. Mag. Nat. Hist.* 2 (3): 205; CAMERON 1931, *Fauna of British India* 2: 41-42.

Paederus ruficoxis Kraatz, 1859, *Arch. Naturg.* 25 (1): 151.

This species is closely related to *Paederus fuscipes* Curtis but can be easily separated from the latter species by its coxae and extreme base of femora reddish testaceous, abdominal sternite 5 of male devoid of any median emargination at posterior margin.

Specimen examined: SRI LANKA: Central, Crinigathana, 650 m, Mahawali Ganga, 9.II.1970, 1 ex., Mussard, Besuchet and Löbl collection.

Distribution: INDIA: SRI LANKA; BURMA; ANNAM AND TONKIN.



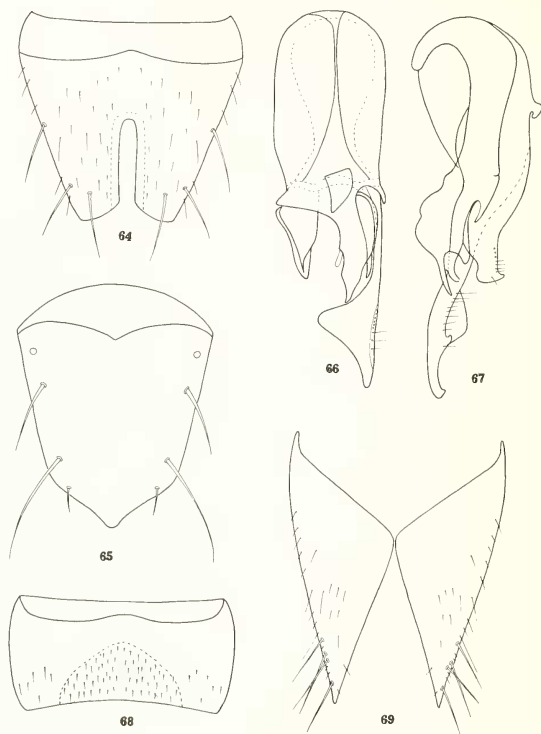
FIGS. 55-63.

55: *Paederus (Pseudopaederus) loebli* sp. nov., sternite six, male; 56: sternite seven, male; 57: *Paederus (Pseudopaederus) mussardi* sp. nov., aedeagus, dorsal view; 58: aedeagus, lateral view; 59: sternite six, male; 60: sternite seven, male; 61: sternite four, male; 62: sternite five, male; 63: *Paederus (Pseudopaederus) loebli* sp. nov., tergum seven, male.

20. *Paederus variicornis* Fauvel

Paederus variicornis Fauvel, 1903, *Revue Ent.* 22: 154; CAMERON 1931, *Fauna of British India* 2: 49-50.

This is a distinct species and was described from Tamil Nadu in India and can be easily recognised by its head and elytra being blue, prothorax, scutellum and abdominal segments 1-4 reddish, antennae black, scape and pedicel and segments 9-11 reddish testaceous, legs black, femora at base broadly testaceous. Species is very shining.



FIGS. 64-69.

64: *Paederus (Pseudopaederus) pallidus* Bernhauer, sternite six, male; 65: tergum six, male; 66: *Paederus (Pseudopaederus) loebli* sp. nov., aedeagus, dorsal view; 67: aedeagus, lateral view; 68: sternite five, male; 69: *Paederus (Pseudopaederus) pallidus* Bernhauer, tergum seven, male.

Specimen examined: SRI LANKA: Central, Hatton, 1400 m., 9.II.1970, 1 ex., Mussard, Besuchet and Löbl collection.

Distribution: INDIA (Tamil Nadu); SRI LANKA. In the present study this species is being recorded for the first time from Sri Lanka.

21. *Paederus sondaicus* Fauvel

Paederus sondaicus Fauvel, 1895, *Revue Ent.* 14: 232; CAMERON 1931, *Fauna of British India* 2: 37-38.

Paederus javanus Erichson, 1839-40, *Gen. Spec. Staph.*: 654; KRAATZ 1859, *Arch. Naturg.* 25 (1): 150.

This species is closely related to *Paederus sharpi* Cameron but differs from the latter species by its punctuation of head being sparser, and elytra blue and its punctuation comparatively less coarse.

Specimens examined: SRI LANKA: Central, Hatton, 1400 m, 9.II.1970, 2 exs., Mussard, Besuchet and Löbl collection.

Distribution: INDIA (Tamil Nadu, Maharashtra and Meghalaya); BURMA; SUMATRA; JAVA AND TONKIN.

22. *Paederus melampus* Erichson

Paederus melampus Erichson, 1839-40, *Gen. Spec. Staph.*: 660; KRAATZ 1859, *Arch. Naturg.* 25 (1): 153; CAMERON 1931, *Fauna of British India* 2: 43.

This species is closely related to *Paederus fuscipes* Curtis but can be easily separated from the latter species by its head being blue black, elytra shorter and steel blue, antennae black with scape and pedicel testaceous and legs black.

Specimens examined: SRI LANKA: Western, Gampaha, 5.XII.1972, 6 exs., Mussard, Besuchet and Löbl collection.

Distribution: INDIA (Maharashtra); BANGLADESH; SRI LANKA. This species is being recorded for the first time from Sri Lanka.

23. *Paederus fuscipes* Curtis

Paederus fuscipes Curtis, 1823-40. *British Entomology* 3: 108; CAMERON 1931, *Fauna of British India* 2: 40-41.

This species is closely related to *Paederus sondaicus* Fauvel but smaller in size and antennal segment 11 being black.

Specimens examined: INDIA: Tamil-Nadu, Coimbatore, 440 m, 22.X.1972. 1 ex.; Madurai, 2.XI.1972, 1 ex.; Madras: Amaravati Dam, 20 kms. from Udamalpat, 400 m. 26.XI.1972, 2 exs.; SRI LANKA: Western, Gampaha, 5.XII.1972, 1 ex.; Northern: Mullaittivu, 6.II.1970, 1 ex.; Southern: Tissamaharama, 23.I.1970, 1 ex., all the specimens collected by Mussard, Besuchet and Löbl.

Distribution: INDIA (Tamil-Nadu); SRI LANKA; All over the old world.

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